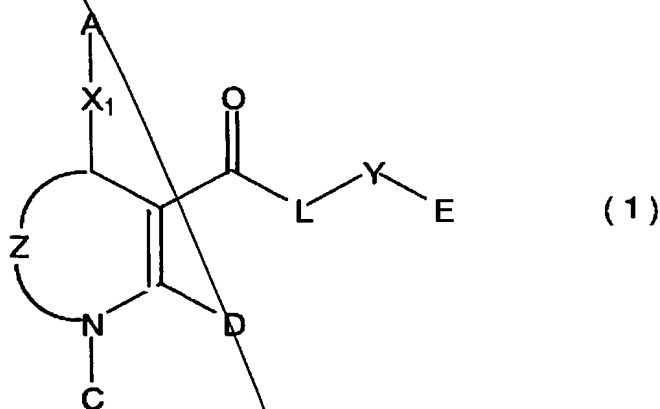
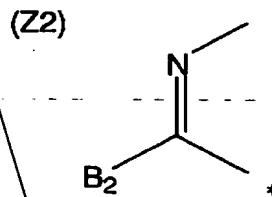
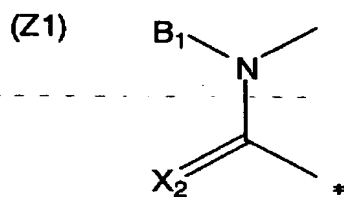


What is claimed is:

1. Dihydropyrimidine derivatives of the following general formula (1), tautomers thereof and pharmaceutically acceptable salts thereof.



5 wherein Z represents a group of the following general formula (Z1) or (Z2), which is bonded to the nitrogen atom at a symbol "*".

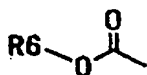


- 10 wherein B₁ represents hydrogen atom, a lower alkyl group which may contain a hetero atom in the chain thereof, a lower alkylcarbonyl group (only when L represents oxygen atom, Y represents an interatomic bond and E represents hydrogen atom), an aryl-lower alkyl group, a

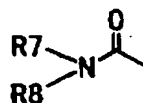
heteroaryl-lower alkyl group, a hydroxy-lower alkyl group, a halogeno-lower alkyl group, an amino-lower alkyl group, a carboxy-lower alkyl group, a lower alkyloxycarbonyl-lower alkyl group or a group of the following general formula (3) or (4):

5

(3)



(4)



wherein R⁶ to R⁸ each represent hydrogen atom, a linear, branched or cyclic, saturated or unsaturated hydrocarbon group having 1 to 6 carbon atoms, a substituted or unsubstituted aryl group, a substituted or unsubstituted heteroaryl group, a hydroxy-lower alkyl group, a hydroxy-lower alkenyl group, a halogeno-lower alkyl group, a halogeno-lower alkenyl group, an amino-lower alkyl group, an amino-lower alkenyl group, a carboxy-lower alkyl group, a carboxy-lower alkenyl group, a substituted or unsubstituted aryl-lower alkyl group, a substituted or unsubstituted aryl-lower alkenyl group, a substituted or unsubstituted diaryl-lower alkyl group, a substituted or unsubstituted heteroaryl-lower alkyl group, a substituted or unsubstituted heteroaryl-lower alkenyl group, a cyano-lower alkyl group or a cyano-lower alkenyl group, and the chains of R⁶ to R⁸ may contain a hetero atom, with the proviso that when R⁶ to R⁸ each represent a linear, branched or cyclic, saturated or unsaturated hydrocarbon group having 1 to 6 carbon atoms, a substituted or unsubstituted aryl group, a hydroxy-lower alkyl group, a hydroxy-lower

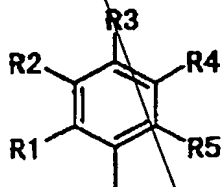
alkenyl group, a halogeno-lower alkyl group, a halogeno-lower alkenyl group, a carboxy-lower alkyl group, a carboxy-lower alkenyl group, a substituted or unsubstituted aryl-lower alkyl group, a substituted or unsubstituted aryl-lower alkenyl group, a substituted or unsubstituted heteroaryl-lower alkyl group or, a substituted or unsubstituted heteroaryl-lower alkenyl group, L must be oxygen atom, Y must be an interatomic bond and E must be hydrogen atom,

B₂ represents an amino group, a lower alkyl group which may contain a hetero atom in the chain thereof, a lower alkylamino group, a lower alkylthio group, an aryl-lower alkyl group, a heteroaryl-lower alkyl group, a hydroxy-lower alkyl group, a halogeno-lower alkyl group, a substituted or unsubstituted aryl group or a substituted or unsubstituted heteroaryl group,

X₂ represents oxygen atom or sulfur atom,

A represents a group of the following general formula (2), or 1-naphthyl, 2-naphthyl, indole-2-yl, indole-3-yl, thiophene-3-yl, thiophene-2-yl, furan-3-yl, furan-2-yl, pyridine-4-yl, pyridine-3-yl or pyridine-2-yl group:

(2)



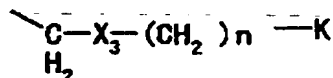
wherein R¹, R², R³, R⁴ and R⁵ may be the same or different from each other and each represent hydrogen atom, a halogen atom, hydroxyl group, carboxyl group, amino group, cyano group, nitro group, a lower alkyl group, a lower alkoxyl group, a lower alkylamino group, a lower alkylthio

group, a lower alkanoyl group, a lower alkoxycarbonyl group, a hydroxy-lower alkyl group, a hydroxy-lower alkoxy group, a hydroxy-lower alkenyl group, a halogeno-lower alkyl group, a halogeno-lower alkoxy group, an amino-lower alkyl group, an amino-lower alkoxy group, an amino-lower alkenyl group, a carboxy-lower alkyl group, a carboxy-lower alkoxy group, a carboxy-lower alkenyl group, an aryl-lower alkoxy group or an aroyl group,

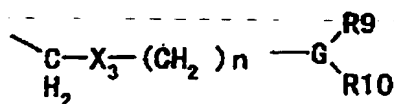
C represents hydrogen atom, a lower alkyl group, a hydroxy-lower alkyl group, an aryl-lower alkyl group, a heteroaryl-lower alkyl group, an amino-lower alkyl group or a carboxy-lower alkyl group,

D represents hydrogen atom, a lower alkyl group, dimethoxymethyl group, cyano group, an aryl-lower alkyl group, a heteroaryl-lower alkyl group, a hydroxy-lower alkyl group, a halogeno-lower alkyl group, an amino-lower alkyl group, a carboxy-lower alkyl group or a group of the following general formula (5) or (6):

(5)



(6)

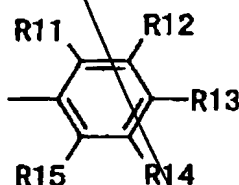


wherein X_3 represents O, S or N-R_8 , n represents an integer of 0 to 6, K in general formula (5) represents hydrogen atom, a halogen atom, hydroxyl group, carboxyl group, amino group, cyano group, nitro group, azido group, a substituted or unsubstituted aryl group or a substituted or unsubstituted heteroaryl group, G in the general formula (6) represents N

Sub
A9
5 or C-H, wherein R⁸ to R¹⁰ may be the same or different from each other, and they each represent hydrogen atom, a linear, branched or cyclic, saturated or unsaturated hydrocarbon group having 1 to 6 carbon atoms, a substituted or unsubstituted aryl group, a substituted or unsubstituted heteroaryl group, a hydroxy-lower alkyl group, a hydroxy-lower alkenyl group, a halogeno-lower alkyl group, a halogeno-lower alkenyl group, an amino-lower alkyl group, an amino-lower alkenyl group, a carboxy-lower alkyl group, a carboxy-lower alkenyl group, an aryl-lower alkyl group, an aryl-lower alkenyl group, a heteroaryl-lower alkyl group, a heteroaryl-lower alkenyl group, a cyano-lower alkyl group or a cyano-lower alkenyl group, and the chains may contain a hetero atom, or R⁹ and R¹⁰ may together form a ring which may contain a hetero atom,

E represents hydrogen atom (only when L represents oxygen atom and Y represents an interatomic bond), a group of the following general formula
15 (7), a substituted or unsubstituted heteroaryl group, cyclopentyl group, cyclohexyl group, pyrrolidinone-1-yl group or piperidinone-1-yl group:

(7)



wherein R¹¹, R¹², R¹³, R¹⁴ and R¹⁵ may be the same or different from each other and each represent hydrogen atom, a halogen atom, hydroxyl group, 20 carboxyl group, amino group, cyano group, nitro group, a lower alkyl

Sub
A9 5 group, a lower alkoxyl group, a lower alkylamino group, a lower alkylthio group, a lower alkanoyl group, a hydroxy-lower alkyl group, a hydroxy-lower alkoxyl group, a hydroxy-lower alkenyl group, a halogeno-lower alkyl group, a halogeno-lower alkoxyl group, an amino-lower alkyl group, an amino-lower alkoxyl group, an amino-lower alkenyl group, a carboxy-lower alkyl group, a carboxy-lower alkoxyl group, a carboxy-lower alkenyl group, an aryl-lower alkyl group, an aryl-lower alkoxyl group, a lower alkoxycarbonyl group, an aroyl group, a substituted or unsubstituted aryl group, a substituted or unsubstituted heteroaryl group or a saturated cyclic hydrocarbon having 3 to 8 carbon atoms, which may contain a hetero atom in the chain thereof and/or in the ring thereof,

X₁ represents an interatomic bond, -CH₂-, -CH₂CH₂-, -CH=CH- or -C≡C-,

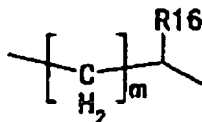
L represents >N-F or oxygen atom (only when Z represents Z₁),

wherein F represents hydrogen atom or a lower alkyl group which may contain a hetero atom in the chain thereof, a hydroxy-lower alkyl group, an amino-lower alkyl group, a carboxy-lower alkyl group or a lower alkyloxycarbonyl-lower alkyl group,

Y represents an interatomic bond (only when L represents oxygen atom and E represents hydrogen atom), a saturated or unsaturated linear

hydrocarbon group having 1 to 6 carbon atoms, which may contain a hetero atom in the group thereof, or a group of the following general formula (8):

(8)



Sub
A9

wherein R₁₆ represents hydrogen atom, a substituted or unsubstituted, saturated or unsaturated linear, branched or cyclic hydrocarbon group having 1 to 6 carbon atoms, a substituted or unsubstituted aryl group, a substituted or unsubstituted heteroaryl group, a hydroxy-lower alkyl group, a hydroxy-lower alkenyl group, a halogeno-lower alkyl group, a halogeno-lower alkenyl group, an amino-lower alkyl group, an amino-lower alkenyl group, a carboxy-lower alkyl group, a carboxy-lower alkenyl group, an aryl-lower alkyl group, an aryl-lower alkenyl group, a heteroaryl-lower alkyl group, a heteroaryl-lower alkenyl group, a cyano-lower alkyl group or a cyano-lower alkenyl group, and the chains of R¹⁶ may contain a hetero atom, and m represents an integer of 0 to 5.

2. The dihydropyrimidine derivatives, tautomers thereof and pharmaceutically acceptable salts thereof according to claim 1, wherein Z represents Z₁ and L represents >N-F.

3. The dihydropyrimidine derivatives, tautomers thereof and pharmaceutically acceptable salts thereof according to claim 1, wherein Z represents Z₁, L represents >N-F, A represents a group of general formula (2), B₁ represents hydrogen atom and X₁ represents an interatomic bond.

4. The dihydropyrimidine derivatives, tautomers thereof and pharmaceutically acceptable salts thereof according to claim 1, wherein Z represents Z₁, L represents >N-F, A represents a group of general formula (2), B₁ represents hydrogen atom, E represents a group of general formula

(7), thiophene-3-yl group, thiophene-2-yl group, furan-3-yl group, furan-2-yl group, pyridine-4-yl group, pyridine-3-yl group, pyridine-2-yl group or imidazole-1-yl group and X_1 represents an interatomic bond.

5 5. The dihydropyrimidine derivatives, tautomers thereof and pharmaceutically acceptable salts thereof according to claim 1, wherein Z represents Z_1 , L represents $>N-F$, A represents a group of general formula (2), B_1 , C and F each represent hydrogen atom, E represents a group of general formula (7) and X_1 represents an interatomic bond.

10 6. The dihydropyrimidine derivatives, tautomers thereof and pharmaceutically acceptable salts thereof according to claim 1, wherein Z represents Z_1 , L represents $>N-F$, A represents a group of general formula (2), B_1 , C and F each represent hydrogen atom, D represents a lower alkyl group, E represents a group of general formula (7), X_1 represents an interatomic bond and Y represents a group of general formula (8) wherein
15 m represents an integer of 1 to 4 and R_{16} represents a substituted or unsubstituted aryl group.

20 7. The dihydropyrimidine derivatives, tautomers thereof and pharmaceutically acceptable salts thereof according to claim 1, wherein Z represents Z_1 , L represents $>N-F$, A represents a group of general formula (2), B_1 , C and F each represent hydrogen atom, D represents a lower alkyl group, E represents a group of general formula (7) and X_1 represents an interatomic bond.

25 8. The dihydropyrimidine derivatives, tautomers thereof and pharmaceutically acceptable salts thereof according to claim 1, wherein Z represents Z_1 , L represents $>N-F$, A represents a group of general formula (2), B_1 , C and F each represent hydrogen atom, D represents a group of

general formula (5) wherein X_3 represents oxygen atom and n represents an integer of 1 to 3, E represents a group of general formula (7) and X_1 represents an interatomic bond.

5 9. The dihydropyrimidine derivatives, tautomers thereof and pharmaceutically acceptable salts thereof according to claim 1, wherein Z represents Z_1 , L represents $>N-F$, A represents a group of general formula (2), B_1 , C and F each represent hydrogen atom, D represents a group of general formula (6) wherein X_3 represents oxygen atom and n represents an integer of 1 to 3, E represents a group of general formula (7) and X_1 represents an interatomic bond.

10 10. The dihydropyrimidine derivatives, tautomers thereof and pharmaceutically acceptable salts thereof according to claim 1, wherein Z represents Z_1 , L represents $>N-F$, A represents a group of general formula (2), C and F each represent hydrogen atom, B_1 represents a group of general formula (4), R_7 and R_8 each represent hydrogen atom, X_1 represents an interatomic bond and X_2 represents an oxygen atom.

11. The dihydropyrimidine derivatives, tautomers thereof and pharmaceutically acceptable salts thereof according to claim 1, wherein Z represents Z_1 , L represents $>N-F$, A represents a group of general formula (2), B_1 , C and F each represent hydrogen atom, D represents a lower alkyl group, E represents a group of general formula (7), X_1 represents an interatomic bond and Y represents a group of general formula (8), wherein m represents an integer of 1 to 4 and R_{16} represents a substituted or unsubstituted aryl group, or a saturated or unsaturated hydrocarbon group having 3 or 4 carbon atoms.

25 12. An N-type calcium channel antagonist comprising a

dihydropyrimidine derivative, a tautomer thereof or a pharmaceutically acceptable salt thereof according to any of claims 1 to 11 as an active ingredient.

13. A therapeutic agent comprising a dihydropyrimidine derivative, a
5 tautomer thereof or a pharmaceutically acceptable salt thereof according to any of claims 1 to 11 as the active ingredient, for any of acute stage of ischemic cerebrovascular disorders caused by cerebral infarction or intracerebral bleeding, Alzheimer's disease, AIDS related dementia, Parkinson's disease, progressive neurodegenerative diseases, neuropathy
10 caused by head injury, pain caused by thromboangiitis obliterans, postoperative pain, migraine, visceral pain, bronchial asthma, unstable angina, irritable colitis and withdrawal symptoms after addiction to drugs.

14. The dihydropyrimidine derivatives, tautomers thereof and
15 pharmaceutically acceptable salts thereof according to claim 1, wherein Z represents Z_2 , L represents $>N-F$ and C represents hydrogen atom.

15. The dihydropyrimidine derivatives, tautomers thereof and pharmaceutically acceptable salts thereof according to claim 1, wherein Z represents Z_2 , L represents $>N-F$, C represents hydrogen atom, A
20 represents a group of general formula (2), F represents hydrogen atom and X_1 represents an interatomic bond.

16. The dihydropyrimidine derivatives, tautomers thereof and pharmaceutically acceptable salts thereof according to claim 1, wherein Z represents Z_2 , L represents $>N-F$, C represents hydrogen atom, A
25 represents a group of general formula (2), E represents a group of general formula (7), F represents hydrogen atom and X_1 represents an interatomic

bond.

17. The dihydropyrimidine derivatives, tautomers thereof and pharmaceutically acceptable salts thereof according to claim 1, wherein Z represents Z_2 , L represents $>N-F$, C represents hydrogen atom, A represents a group of general formula (2), E represents a group of general formula (7), F represents hydrogen atom, X_1 represents an interatomic bond and B_2 represents a substituted or unsubstituted aryl group or a substituted or unsubstituted heteroaryl group.

18. The dihydropyrimidine derivatives, tautomers thereof and pharmaceutically acceptable salts thereof according to claim 1, wherein Z represents Z_2 , L represents $>N-F$, C represents hydrogen atom, A represents a group of general formula (2), D represents a group of general formula (6) wherein X_3 represents oxygen atom and n represents an integer of 2 or 3, E represents a group of general formula (7), F represents hydrogen atom and X_1 represents an interatomic bond.

19. The dihydropyrimidine derivatives, tautomers thereof and pharmaceutically acceptable salts thereof according to claim 1, wherein Z represents Z_2 , L represents $>N-F$, C represents hydrogen atom, A represents a group of general formula (2), E represents a group of general formula (7), F represents hydrogen atom, X_1 represents an interatomic bond and Y represents a group of general formula (8), wherein m represents an integer of 1 to 4 and R_{16} represents a substituted or unsubstituted aryl group.

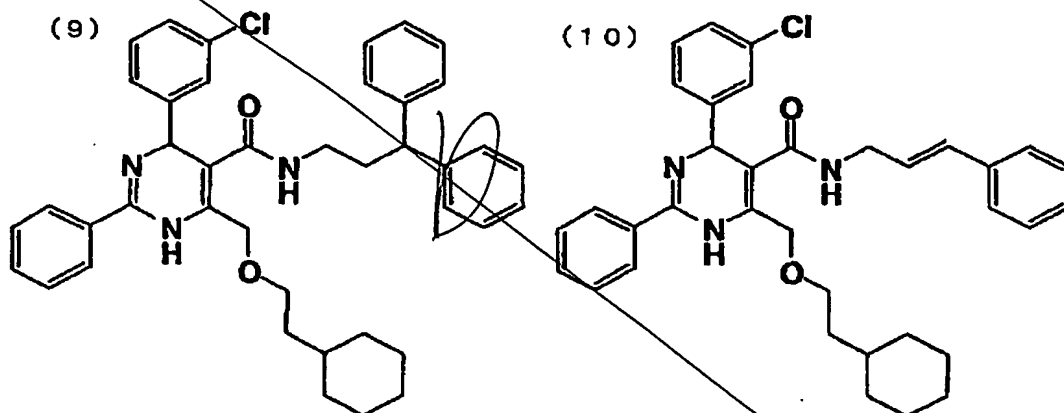
20. The dihydropyrimidine derivatives, tautomers thereof and pharmaceutically acceptable salts thereof according to claim 1, wherein Z represents Z_2 , L represents $>N-F$, C represents hydrogen atom, A

represents a group of general formula (2), E represents a group of general formula (7), F represents hydrogen atom, X_1 represents an interatomic bond and Y represents an unsaturated hydrocarbon group having 3 or 4 carbon atoms.

- 5 21. The dihydropyrimidine derivatives, tautomers thereof and pharmaceutically acceptable salts thereof according to claim 1, wherein Z represents Z_2 , L represents $>N-F$, C represents hydrogen atom, A represents a group of general formula (2), D represents a group of general formula (6), wherein X_3 represents oxygen atom, n represents an integer of 2 or 3 and R_9 and R_{10} , bonded together to form a 5- to 7-membered ring together with G, E represents a group of general formula (7), F represents hydrogen atom, X_1 represents an interatomic bond and Y represents a group of general formula (8), wherein m represents an integer of 1 to 4 and R_{16} represents a substituted or unsubstituted aryl group, or an unsaturated hydrocarbon group having 3 or 4 carbon atoms.

22. Dihydropyrimidine derivatives which are following compounds (9) and (10), tautomers thereof and pharmaceutically acceptable salts thereof:

- 20 4-(3-chlorophenyl)-6-[(2-cyclohexylethoxy)methyl]-5-(3,3-diphenylpropyl-carbamoyl)-2-phenyl-1,4-dihydropyrimidine [compound (9)], and 4-(3-chlorophenyl)-6-[(2-cyclohexylethoxy)methyl]-2-phenyl-5-[(3-phenyl-2-propene-1-yl)carbamoyl]-1,4-dihydropyrimidine [compound (10)]:



23. An N-type calcium channel antagonist comprising a dihydropyrimidine derivative, a tautomer thereof or a pharmaceutically acceptable salt thereof according to any of claims 14 to 22 as an active ingredient.

5 24. A therapeutic agent comprising a dihydropyrimidine derivative or a pharmaceutically acceptable salt thereof according to any of claims 14 to 22 as the active ingredient, for any of acute stage of ischemic cerebrovascular disorders caused by cerebral infarction or intracerebral bleeding, Alzheimer's disease, AIDS-related dementia, Parkinson's
10 disease, progressive neurodegenerative diseases, neuropathy caused by head injury, pain caused by thromboangiitis obliterans, postoperative pain, migraine, visceral pain, bronchial asthma, unstable angina, irritable colitis and withdrawal symptoms after addiction to drugs.

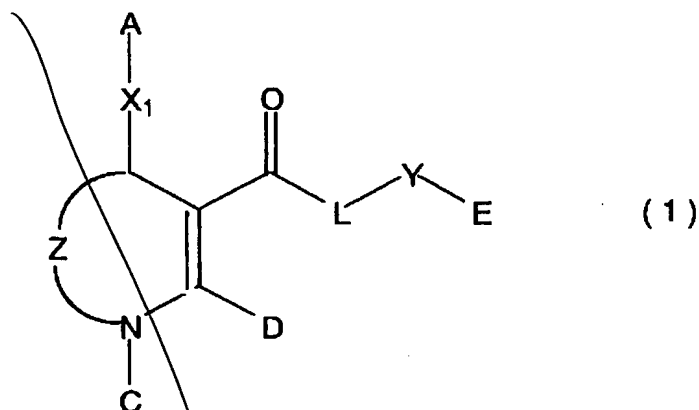
25. A pharmaceutical composition comprising a dihydropyrimidine
15 derivative, a tautomer thereof or a pharmaceutically acceptable salt thereof according to any of claims 1 to 11 or claims 14 to 22 as an active ingredient.

26. The dihydropyrimidine derivatives, tautomers thereof and pharmaceutically acceptable salts thereof according to claim 1, wherein Z represents Z_1 , L represents oxygen atom, Y represents an interatomic bond, E represents hydrogen atom, A represents a group of general formula (2), B_1 represents a group of general formula (4), X_1 represents an interatomic bond and X_2 represents oxygen atom.

27. An N-type calcium channel antagonist comprising a dihydropyrimidine derivative, a tautomer thereof or a pharmaceutically acceptable salt thereof according to claim 26 as an active ingredient.

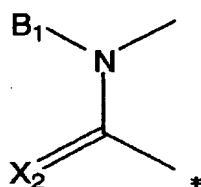
10 28. A therapeutic agent comprising a dihydropyrimidine derivative or a pharmaceutically acceptable salt thereof according to claim 26 as the active ingredient, for any of acute stage of ischemic cerebrovascular disorders caused by cerebral infarction or intracerebral bleeding, Alzheimer's disease, AIDS related dementia, Parkinson's disease,
15 progressive neurodegenerative diseases, neuropathy caused by head injury, pain caused by thromboangiitis obliterans, postoperative pain, migraine, visceral pain, bronchial asthma, unstable angina, irritable colitis and withdrawal symptoms after addiction to drugs.

29. An N-type calcium channel antagonist comprising a
20 dihydropyrimidine derivative of the following general formula (1), a tautomer thereof or a pharmaceutically acceptable salt thereof as the active ingredient:

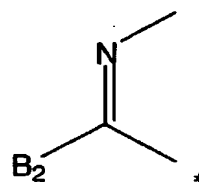


wherein Z represents a group of the following general formula (Z1) or (Z2), which is bonded to the nitrogen atom at a symbol “*”.

(Z1)

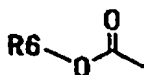


(Z2)

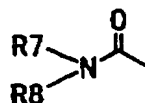


wherein B₁ represents hydrogen atom, a lower alkyl group which may contain a hetero-atom in the chain thereof, a lower-alkylcarbonyl group, an aryl-lower alkyl group, a heteroaryl-lower alkyl group, a hydroxy-lower alkyl group, a halogeno-lower alkyl group, an amino-lower alkyl group, a carboxy-lower alkyl group, a lower alkyloxycarbonyl-lower alkyl group or a group of the following general formula (3) or (4):

(3)



(4)



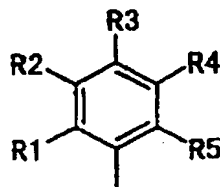
wherein R^6 to R^8 each represent hydrogen atom, a linear, branched or cyclic, saturated or unsaturated hydrocarbon group having 1 to 6 carbon atoms, an alkyl group substituted with a cyclic alkyl group which may contain a hetero atom, a substituted or unsubstituted aryl group, a substituted or unsubstituted heteroaryl group, a hydroxy-lower alkyl group, a hydroxy-lower alkenyl group, a halogeno-lower alkyl group, a halogeno-lower alkenyl group, an amino-lower alkyl group, an amino-lower alkenyl group, a carboxy-lower alkyl group, a carboxy-lower alkenyl group, a substituted or unsubstituted aryl-lower alkyl group, a substituted or unsubstituted aryl-lower alkenyl group, a substituted or unsubstituted diaryl-lower alkyl group, a substituted or unsubstituted heteroaryl-lower alkyl group, a substituted or unsubstituted heteroaryl-lower alkenyl group, a cyano-lower alkyl group or a cyano-lower alkenyl group, and the chains of R^6 to R^8 may contain a hetero atom, or R^7 and R^8 may together form a ring which may contain a hetero atom,

B_2 represents an amino group, a lower alkyl group which may contain a hetero atom in the chain thereof, a lower alkylamino group, a lower alkylthio group, an aryl-lower alkyl group, a heteroaryl-lower alkyl group, a hydroxy-lower alkyl group, a halogeno-lower alkyl group, a substituted or unsubstituted aryl group or a substituted or unsubstituted heteroaryl group,

X_2 represents oxygen atom or sulfur atom,

A represents a group of the following general formula (2), or 1-naphthyl, 2-naphthyl, indole-2-yl, indole-3-yl, thiophene-3-yl, thiophene-2-yl, furan-3-yl, furan-2-yl, pyridine-4-yl, pyridine-3-yl or pyridine-2-yl group:

(2)



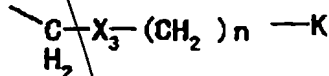
wherein R¹, R², R³, R⁴ and R⁵ may be the same or different from each other and each represent hydrogen atom, a halogen atom, hydroxyl group, carboxyl group, amino group, cyano group, nitro group, a lower alkyl group, a lower alkoxyl group, a lower alkylamino group, a lower alkylthio group, a lower alkanoyl group, a lower alkoxycarbonyl group, a hydroxy-lower alkyl group, a hydroxy-lower alkoxyl group, a hydroxy-lower alkenyl group, a halogeno-lower alkyl group, a halogeno-lower alkoxyl group, an amino-lower alkyl group, an amino-lower alkoxyl group, an amino-lower alkenyl group, a carboxy-lower alkyl group, a carboxy-lower alkoxyl group, a carboxy-lower alkenyl group, an aryl-lower alkoxyl group or an aroyl group,

C represents hydrogen atom, a lower alkyl group, a hydroxy-lower alkyl group, an aryl-lower alkyl group, a heteroaryl-lower alkyl group, an amino-lower alkyl group or a carboxy-lower alkyl group,

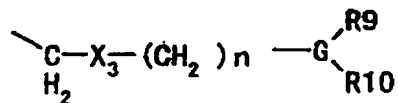
D represents hydrogen atom, a lower alkyl group, dimethoxymethyl group, cyano group, an aryl-lower alkyl group, a heteroaryl-lower alkyl group, a hydroxy-lower alkyl group, a halogeno-lower alkyl group, an amino-lower alkyl group, a carboxy-lower alkyl group or a group of the following

general formula (5) or (6):

(5)



(6)

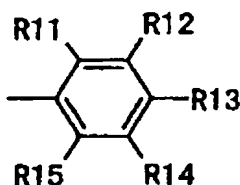


wherein X_3 represents O, S or $\text{N-R}_8'$, n represents an integer of 0 to 6, K in general formula (5) represents hydrogen atom, a halogen atom, hydroxyl group, carboxyl group, amino group, cyano group, nitro group, azido group, a substituted or unsubstituted aryl group or a substituted or unsubstituted heteroaryl group, G in the general formula (6) represents N or C-H, wherein R^8 to R^{10} may be the same or different from each other, and they each represent hydrogen atom, a linear, branched or cyclic, saturated or unsaturated hydrocarbon group having 1 to 6 carbon atoms, a substituted or unsubstituted aryl group, a substituted or unsubstituted heteroaryl group, a hydroxy-lower alkyl group, a hydroxy-lower alkenyl group, a halogeno-lower alkyl group, a halogeno-lower alkenyl group, an amino-lower alkyl group, an amino-lower alkenyl group, a carboxy-lower alkyl group, a carboxy-lower alkenyl group, an aryl-lower alkyl group, an aryl-lower alkenyl group, a heteroaryl-lower alkyl group, a heteroaryl-lower alkenyl group, a cyano-lower alkyl group or a cyano-lower alkenyl group, and the chains may contain a hetero atom, or R^9 and R^{10} may together form a ring which may contain a hetero atom,

E represents hydrogen atom (only when L represents oxygen atom and Y represents an interatomic bond), a group of the following general formula

(7), a substituted or unsubstituted heteroaryl group, cyclopentyl group, cyclohexyl group, morpholine-1-yl group, pyrrolidine-1-yl group, pyrrolidinone-1-yl group, piperidine-1-yl group, piperidinone-1-yl group, piperazine-1-yl group, homopiperidine-1-yl group or homopiprazine-1-yl group:

(7)



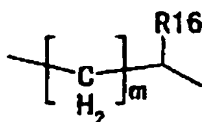
wherein R¹¹, R¹², R¹³, R¹⁴ and R¹⁵ may be the same or different from each other and each represent hydrogen atom, a halogen atom, hydroxyl group, carboxyl group, amino group, cyano group, nitro group, a lower alkyl group, a lower alkoxy group, a lower alkylamino group, a lower alkylthio group, a lower alkanoyl group, a hydroxy-lower alkyl group, a hydroxy-lower alkoxy group, a hydroxy-lower alkenyl group, a halogeno-lower alkyl group, a halogeno-lower alkoxy group, an amino-lower alkyl group, an amino-lower alkoxy group, an amino-lower alkenyl group, a carboxy-lower alkyl group, a carboxy-lower alkoxy group, a carboxy-lower alkenyl group, an aryl-lower alkyl group, an aryl-lower alkoxy group, a lower alkoxy-carbonyl group, an aroyl group, a substituted or unsubstituted aryl group, a substituted or unsubstituted heteroaryl group or a saturated cyclic hydrocarbon group having 3 to 8 carbon atoms, which may contain a hetero atom in the chain thereof and/or in the ring thereof,

X₁ represents an interatomic bond, -CH₂-, -CH₂CH₂-, -CH=CH- or -C≡C-, L represents >N-F or oxygen atom (only when Z represents Z₁) wherein F

represents hydrogen atom or a lower alkyl group which may contain a hetero atom in the chain thereof, a hydroxy-lower alkyl group, an amino-lower alkyl group, a carboxy-lower alkyl group or a lower alkyloxycarbonyl-lower alkyl group,

- 5 Y represents an interatomic bond (only when L represents oxygen atom and E represents hydrogen atom), a saturated or unsaturated linear hydrocarbon group having 1 to 6 carbon atoms, which may contain a hetero atom in the group thereof, or a group of the following general formula (8):

(8)



- 10 wherein R_{16} represents hydrogen atom, a substituted or unsubstituted, saturated or unsaturated linear, branched or cyclic hydrocarbon group having 1 to 6 carbon atoms, a substituted or unsubstituted aryl group, a substituted or unsubstituted heteroaryl group, a hydroxy-lower alkyl group, a hydroxy-lower alkenyl group, a halogeno-lower alkyl group, a halogeno-lower alkenyl group, an amino-lower alkyl group, an amino-lower alkenyl group, a carboxy-lower alkyl group, a carboxy-lower alkenyl group, an aryl-lower alkyl group, an aryl-lower alkenyl group, a heteroaryl-lower alkyl group, a heteroaryl-lower alkenyl group, a cyano-lower alkyl group or a cyano-lower alkenyl group, and the chains of R^{16}
- 15
- 20 may contain a hetero atom, and m represents an integer of 0 to 5.

30. A therapeutic agent comprising a dihydropyrimidine derivative or a pharmaceutically acceptable salt thereof according to claim 29 as the

active ingredient, for any of acute stage of ischemic cerebrovascular disorders caused by cerebral infarction or intracerebral bleeding, Alzheimer's disease, AIDS related dementia, Parkinson's disease, progressive neurodegenerative diseases, neuropathy caused by head
5 injury, pain caused by thromboangiitis obliterans, postoperative pain, migraine, visceral pain, bronchial asthma, unstable angina, irritable colitis and withdrawal symptoms after addiction to drugs.

add
C
add
D₁